

## CLAIMS

I claim:

1. A spray nozzle assembly for removably positioning within a threaded retaining nut for removably securing to a spray gun head, said assembly including:

a housing having a top wall, a bottom wall a peripheral wall extending between and being attached to said top and bottom walls, each of said top and bottom walls having a circular shape, said peripheral wall having a peripheral outer shoulder therein such that said bottom wall has a greater diameter than said top wall, said housing having an opening therein extending through said bottom and top walls, said opening including a top portion adjacent to said top wall and a bottom portion adjacent to said bottom wall, said bottom portion having a larger diameter with respect to said top portion such that an inner shoulder is defined, said top wall having a slot extending therein and along a diameter of said top wall such that said top portion of said opening opens into said slot, said housing comprising a plastic material;

an insert being mounted within said opening and abutting said inner shoulder, said insert including an upper section positioned within and having generally the same diameter as said top portion and a lower section positioned within and having generally the same diameter as said bottom portion, said bottom portion extending further away from said inner shoulder than said lower section extends from said inner shoulder, said insert having a bore extending therethrough and through said upper and lower sections, said bore being

generally aligned with an axis of said opening, said insert comprising a tungsten carbide material; and  
wherein said housing may be positioned in the retaining nut and secured against the spray gun head such that paint ejected outwardly of the spray gun travels through said bore and outward of said slot.

2. The assembly according to claim 1, wherein said housing has a pair of vertical cutouts therein, each of said cutouts extending into said top wall and toward said outer shoulder such that a pair of planar surfaces are formed in said peripheral wall, a ledge being defined at a bottom edge of each of said planar surfaces, each of said planar surfaces being orientated parallel to said slot.

3. The assembly according to claim 1, wherein said diameter of said bottom wall is generally equal to 0.60 inches and a diameter of said top wall is generally equal to 0.50 inches, a height of said housing from said bottom wall to said outer shoulder being between 0.18 inches and 0.22 inches.

4. The assembly according to claim 3, wherein said slot has a width generally between 0.120 inches and 0.165 inches.

5. The assembly according to claim 3, wherein said slot has a width generally between 0.120 inches and 0.130 inches.

6. The assembly according to claim 4, said top portion of said opening has a diameter generally equal to said width of said slot.

7. The assembly according to claim 3, wherein said slot has a width generally between 0.155 inches and 0.165 inches.

8. The assembly according to claim 4, a distance between said bottom wall and said outer shoulder being generally equal to 0.20 inches.

9. The assembly according to claim 4, wherein said bottom portion of said opening has a diameter generally between 0.190 inches and 0.30 inches.

10. The assembly according to claim 4, wherein said bottom portion of said opening has a diameter generally between 0.190 inches and 0.20 inches.

11. The assembly according to claim 4, wherein said bottom portion of said opening has a diameter generally between 0.28 inches and 0.30 inches.

12. The assembly according to claim 9, a distance between said bottom wall and said outer shoulder being generally equal to 0.20 inches.

13. The assembly according to claim 12, wherein a distance between said bottom wall and said inner shoulder being generally equal to 0.250 inches.

14. The assembly according to claim 3, wherein said upper section of said insert extends into said slot, said bore having a top end, a bottom end and a middle section positioned therebetween, said top end being adjacent to said slot, said bottom end having a diameter generally equal to 0.10 inches, said bore tapering from said bottom end to said middle

section, said middle section having a diameter generally between 0.007 inches and 0.072 inches.

15. The assembly according to claim 14, wherein said middle section has a diameter generally between 0.007 inches and 0.039 inches.

16. The assembly according to claim 14, wherein said middle section has a diameter generally between 0.040 inches and 0.072 inches.

17. The assembly according to claim 14, wherein said top end of said bore comprises an ovaloid having a pair of substantially pointed ends and a pair of arcuate sides extending between said pointed ends, said top end having a greatest width between said arcuate sides generally between 0.120 inches and 0.165 inches and a length between said pointed ends generally between 0.150 inches and 0.190 inches, a line extending between said pointed ends being orientated generally parallel to said slot, said top end tapering to said middle section along an inner perimeter wall of said bore, said bore narrowing at a juncture of said middle section to said inner perimeter wall.

18. The assembly according to claim 14, wherein said greatest width between said arcuate sides is generally between 0.120 inches and 0.130 inches and said length between said pointed ends is generally between 0.150 inches and 0.160 inches.

19. The assembly according to claim 14, wherein said greatest width between said arcuate sides is generally between 0.155 inches and 0.165 inches and said length between said pointed ends is generally between 0.180 inches and 0.190 inches.

20. The assembly according to claim 13, wherein said upper section of said insert extends into said slot, said bore having a top end, a bottom end and a middle section positioned therebetween, said top end being adjacent to said slot, said bottom end having a diameter generally equal to 0.10 inches, said bore tapering from said bottom end to said middle section, said middle section having a diameter generally between 0.007 inches and 0.072 inches, said top end of said bore comprising an ovaloid having a pair of substantially pointed ends and a pair of arcuate sides extending between said pointed ends, said top end having a greatest width between said arcuate sides generally between 0.120 inches and 0.165 inches and a length between said pointed ends generally between 0.150 inches and 0.190 inches, a line extending between said pointed ends being orientated generally parallel to said slot, said top end tapering to said middle section along an inner perimeter wall of said bore, said bore narrowing at a juncture of said middle section to said inner perimeter wall.